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A NEW NOTOUNGULATE FROM THE EARLY TERTIARY OF PATAGONIA[1]

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The most remarkable discovery of the Scarritt Expedition of 1933–34 to Patagonia is a highly fossiliferous pocket in Early Tertiary rocks in central Chubut. This deposit, which we have called the Scarritt Pocket (Rincón de Scarritt), is on the west side of the Sierra or Meseta Canquel in a great embayment known locally as the Rinconada de los Lopez, from an Indian family that formerly lived there. In an air line it is roughly one hundred ten kilometers north-northeast of the settlement of Colonia Sarmiento and ninety kilometers south-southeast of Paso de los Indios on the Chubut River. Although the region is sparsely settled by sheep herders, it is extremely difficult of access and has not been mapped, nor, as far as known, has any previous collecting or scientific exploration been done there.

The fossil deposit will be described in more detail later. It seems to represent the crater filling of an extinct early Oligocene or Eocene volcano, with a thin series of laminated bentonites, deposited in a small, shallow, and probably very evanescent crater lake, together with a thicker filling of ashes, grading into heavy breccia near the crater walls. The whole series contains numerous fossils, which are for the most part fragmentary except in the laminated bentonites where complete, articulated skeletons occur, crushed by the shrinking of the bentonites but otherwise well preserved. It may be conservatively estimated that at least one hundred, and possibly several hundred, complete skeletons are here buried where they can be reached with moderate excavation, and this should become one of the outstanding localities for fossil vertebrates.

The common species in the lake strata is a large notoungulate which appears to be new, and the purpose of the present note is to announce this discovery and to name this new animal. A detailed, monographic account will appear later, but may be long delayed owing to the difficulty of adequate preparation and other factors.

[1]Publications of the Scarritt Expeditions, No. 21.

SCARRITTIA,[1] new genus

TYPE.—*S. canquelensis*, new species.

DIAGNOSIS.—Large, heavy notoungulates with at least the three central hoofs depressed but deeply fissured. Dental formula $\frac{3.1.4.3}{3.1.4.3}$, no distinct diastemata. Mesodont, all teeth rooted. $I\frac{1}{1}$ enlarged. $I\frac{}{1\text{-}2}$ small, $I\frac{}{3}$ moderately enlarged. $C\frac{1}{1}$ as small as or smaller than adjacent teeth. Upper premolars with protoloph weak or absent, central fossa opening anteriorly. Molars of simple, homalodothere-like pattern. Upper molars with strong protoloph, relatively weak hypocone, posterior cingulum strong and enclosing small fossette. $M\frac{3}{3}$ enlarged and elongated.

Scarrittia canquelensis,[2] new species

HORIZON AND LOCALITY.—Early Tertiary, Scarritt Pocket, Central Chubut, Argentina.

TYPE.—A specimen not collected and now unidentifiable.[3]

DIAGNOSIS.—Sole known species of genus as defined above. Skull length individually variable but reaching 51 cm. (probably near the maximum).

This strange animal is at once distinguished from almost any with which it might otherwise be confused by the greatly enlarged $I\frac{1}{1}$, somewhat enlarged $I\frac{}{3}$, and relatively small size of the other incisors. The cheek teeth, also, are distinctive, but less so, as the pattern of these is rather stereotyped in all but the most advanced notoungulates. Contrast with genera of which only cheek teeth are known is thus less marked, without this warranting the suggestion that they therefore are more closely related. The parts in which the greatest differences are to be expected are simply not known in these cases.

Pleurocoelodon, judging from figures of the isolated upper molars, is doubtfully distinct from *Trimerostephanus*, and the latter is very unlike *Scarrittia*. *Lophocoelus* is another dubious genus of the same group. *Scaphops* and *Steniogenium* are considered by Loomis synonyms of *Leontinia*, and therefore there is no reasonable possibility of very close relationship to *Scarrittia*. *Diorotherium* has a large canine and seems to be close to *Homalodotherium* and distant from *Scarrittia*.

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[1]For H. S. Scarritt, patron of the Scarritt Expeditions.

[2]Geographic name from Sierra or Meseta Canquel (pronounced Kan-kel')

[3]This somewhat unusual procedure seems necessary and justified. Nothing in the accepted rules of nomenclature invalidates such a designation of type. The genus and species are not in any sense of the word hypothetical, but are based on definite, accurate notes made from an actual specimen which was carefully studied but which was not collected and was necessarily left under circumstances which make its subsequent identification or collection impossible. There is, however, every reason to believe that it is the common quarry species, excellent specimens of which are permanently preserved, but it is undesirable to delay publication until these are prepared and studied.

The genera most difficult to distinguish from *Scarrittia* are *Henricofilholia* and *Pyralophodon* of the Deseado and *Carolodarwinia* of the Musters. The first two were referred by Ameghino to the Colpodontidae and the last to the Leontiniidae, two families now commonly considered synonymous.

Carolodarwinia is known only from an upper premolar,[1] which, as in *Scarrittia*, has a very feeble protoloph and the central valley opening on the anterior border of the tooth. The squared, pyramidal protocone, however, is unlike *Scarrittia* and the metaloph appears to be weaker. The genera may be closely related, but *Carolodarwinia* is practically indeterminate and too poorly known for any very valuable comparison. In *Pyralophodon* the upper molar (M^{1}?) figured by Ameghino is simpler than in *Scarrittia*, and the metaloph is markedly shorter, the hypocone smaller. In *Henricofilholia* (the species of which are, incidentally, considerably smaller than that here described), the external folds or columns and the internal cingulum are stronger on the upper molars, the other secondary crests and folds rather weaker and different in detail. The genera may well be related, but can hardly be identical.

Scarrittia is tentatively referred to the Leontiniidae. It also resembles the Homalodotheriidae to some extent, but the reduction of the canines and some other details are somewhat more suggestive of *Leontinia* and its allies. The possibly most closely related forms, *Carolodarwinia* and *Henricofilholia*, are also commonly referred to the Leontiniidae (or Colpodontidae)[2] and this collocation may well be retained unless good contrary evidence is discovered.

[1]The canine (?) ascribed to it by Ameghino is too doubtful for serious consideration.

[2]Loomis places *Henricofilholia* in the Isotemnidae, but on what grounds is uncertain as the only resemblance he notes is with *Leontinia*.